IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) An active matrix display device comprising:

a panel on which pixels are arranged in a matrix pattern;

a scanning circuit for sequentially selecting pixels on the panel in units of rows; and

a signal circuit which sequentially receives pieces of video data, each including a status part indicating need/no need for rewriting a pixel and a main data part including video data to be written into the pixel, and which writes corresponding video data into pixels which have been determined to be rewritten based on the status part among the selected pixels, while skipping the other pixels,

wherein the signal circuit receives a video signal including dot data and skip data, both data having the same format including a status part and a data part,

the signal circuit determines whether the video signal includes the dot data or the skip data, and

when it is determined that the video signal includes the skip data, the signal circuit obtains a skip amount indicating the number of pixels to be skipped from the data part of the skip data, and when it is determined that the video signal includes the dot data, the signal circuit extracts luminance information of a pixel to be rewritten from the data part of the dot data.

2. (Original) The active matrix display device according to claim 1, wherein, while the status part of the video data indicates that rewrite is not to be performed, the number of pixels to be skipped, instead of the video data, is written into the main data part.

3. (Currently Amended) An active matrix display device comprising:

a pixel array unit including pixels which are arranged in a matrix pattern;

a scanning circuit for sequentially selecting pixels in units of rows; and

a signal circuit which receives a video signal including serial dot data corresponding to each pixel and which writes the dot data into the selected pixels,

wherein the signal circuit receives a video signal which includes dot data corresponding to pixels to be rewritten but does not include dot data corresponding to pixels not to be rewritten and which includes skip data defining a skip amount, and

the signal circuit sequentially processes the dot data and the skip data so as to write corresponding dot data into pixels to be rewritten while skipping pixels not to be rewritten in accordance with the skip amount,

wherein the signal circuit receives a video signal including dot data and skip data, both data having the same format including a status part and a data part,

the signal circuit determines whether the video signal includes the dot data or the skip data, and

when it is determined that the video signal includes the skip data, the signal circuit obtains a skip amount indicating the number of pixels to be skipped from the data part of the skip data, and when it is determined that the video signal includes the dot data, the signal circuit extracts luminance information of a pixel to be rewritten from the data part of the

dot data.

4. (Canceled)

5. (Currently Amended) The active matrix display device according to ~~claim 4~~ claim 3, wherein, when the number of pixels to be skipped exceeds a maximum number that can be defined by a piece of skip data, the signal circuit processes skip data which is continuously input until the number reaches the target skip amount so as to skip pixels.

6. (Original) The active matrix display device according to claim 3, wherein the signal circuit receives a video signal including row skip data which defines a skip amount in units of rows, and performs writing of dot data while skipping pixels in units of rows based on the row skip data.

7. (Currently Amended) ~~The active matrix display device according to claim 3,~~ An active matrix display device comprising:

a pixel array unit including pixels which are arranged in a matrix pattern;

a scanning circuit for sequentially selecting pixels in units of rows; and

a signal circuit which receives a video signal including serial dot data corresponding to each pixel and which writes the dot data into the selected pixels,

wherein the signal circuit receives a video signal which includes dot data corresponding to pixels to be rewritten but does not include dot data corresponding to pixels not to be rewritten and which includes skip data defining a skip amount, and

the signal circuit sequentially processes the dot data and the skip data so as to write corresponding dot data into pixels to be rewritten while skipping pixels not to be rewritten in accordance with the skip amount,

wherein the signal circuit mixes, at a predetermined ratio, frames to which a partial rewrite operation for partially rewriting the pixels arranged in a matrix pattern is performed by processing the video signal including the dot data and the skip data and frames to which an entire rewrite operation for entirely rewriting the pixels arranged in a matrix pattern is performed by processing the video signal including the dot data.

8. (Currently Amended) ~~The active matrix display device according to claim 3,~~ An active matrix display device comprising:

a pixel array unit including pixels which are arranged in a matrix pattern;

a scanning circuit for sequentially selecting pixels in units of rows; and

a signal circuit which receives a video signal including serial dot data corresponding to each pixel and which writes the dot data into the selected pixels,

wherein the signal circuit receives a video signal which includes dot data corresponding to pixels to be rewritten but does not include dot data corresponding to pixels not to be rewritten and which includes skip data defining a skip amount, and

the signal circuit sequentially processes the dot data and the skip data so as to write corresponding dot data into pixels to be rewritten while skipping pixels not to be rewritten in accordance with the skip amount,

further comprising a signal processing circuit for supplying the video signal including the dot data and the skip data to the signal circuit, the signal processing circuit comprising:

differential detecting means for detecting and outputting a differential value between the video data of a current frame corresponding to a target pixel and the video data of the previous frame;

determining means for determining whether or not the differential value output from the differential detecting means is equal to or exceeds a predetermined threshold value; and

output-data generating means which generates dot data based on status data indicating that a pixel is to be rewritten and the video data of the current frame when the determining means determines that the differential value is equal to or exceeds the predetermined threshold value and which generates skip data based on status data indicating that a pixel is not to be rewritten and a skip amount defining the number of pixels to be skipped when the differential value is less than the predetermined threshold value.

9. (Original) The active matrix display device according to claim 8, further comprising threshold-value setting means for setting the threshold value.

10. (Original) The active matrix display device according to claim 9, wherein the threshold-value setting means detects the dynamic range of the video signal so as to set the threshold value based on the detected dynamic range.

11. (Currently Amended) A signal processing device comprising:

differential detecting means for detecting and outputting a differential value between the video data of a current frame corresponding to a target pixel and the video data of the previous frame;

determining means for determining whether or not the differential value output from the differential detecting means is equal to or exceeds a predetermined threshold value; and

output-data generating means which generates output dot data based on status data indicating that a pixel is to be rewritten and the video data of the current frame when the determining means determines that the differential value is equal to or exceeds the predetermined threshold value and which generates output skip data based on status data indicating that a pixel is not to be rewritten and a skip amount defining the number of pixels to be skipped when the differential value is less than the predetermined threshold value.

12. (Original) The signal processing device according to claim 11, further comprising threshold-value setting means for setting the threshold value.

13. (Original) The signal processing device according to claim 12, wherein the threshold-value setting means detects the dynamic range of the video signal so as to set the threshold value based on the detected dynamic range.

14. (Currently Amended) A method of driving an active matrix display device comprising a panel on which pixels are arranged in a matrix pattern, the method comprising:

a step of sequentially selecting pixels on the panel in units of rows;

a step of sequentially receiving pieces of video data, each including a status part indicating need/no need for rewriting a pixel and a main data part including video data to be written into the pixel; and

a step of writing corresponding video data into pixels which have been determined to be rewritten based on the status part among the selected pixels, while skipping the other pixels,

wherein a signal circuit receives a video signal including dot data and skip data, both data having the same format including a status part and a data part,

the signal circuit determines whether the video signal includes the dot data or the skip data, and

when it is determined that the video signal includes the skip data, the signal circuit obtains a skip amount indicating the number of pixels to be skipped from the data part of the skip data, and when it is determined that the video signal includes the dot data, the signal circuit extracts luminance information of a pixel to be rewritten from the data part of the dot data.

15. (Currently Amended) A method of driving an active matrix display device comprising a pixel array unit including pixels which are arranged in a matrix pattern; a scanning circuit for sequentially selecting pixels in units of rows; and a signal circuit which receives a video signal including serial dot data corresponding to each pixel and which writes the dot data into the selected pixels, the method comprising:

a step of receiving a video signal which includes dot data corresponding to pixels to be rewritten but does not include dot data corresponding to pixels not to be rewritten and which includes skip data defining a skip amount; and

a step of sequentially processing the dot data and the skip data so as to write corresponding dot data into pixels to be rewritten while skipping pixels not to be rewritten in accordance with the skip amount,

wherein the signal circuit receives a video signal including dot data and skip data, both data having the same format including a status part and a data part,

the signal circuit determines whether the video signal includes the dot data or the skip data, and

when it is determined that the video signal includes the skip data, the signal circuit obtains a skip amount indicating the number of pixels to be skipped from the data part of the skip data, and when it is determined that the video signal includes the dot data, the signal circuit extracts luminance information of a pixel to be rewritten from the data part of the dot data.

16. (Currently Amended) A method of processing a signal, the method comprising:

a differential detecting step for detecting and outputting a differential value between the video data of a current frame corresponding to a target pixel and the video data of the previous frame;

a determining step for determining whether or not the differential value output in the differential detecting step is equal to or exceeds a predetermined threshold value; and

an output-data generating step for generating output dot data based on status data indicating that a pixel is to be rewritten and the video data of the current frame when the differential value is determined to be equal to or exceed the predetermined threshold value in the determining step and for generating output skip data based on status data indicating that a pixel is not to be rewritten and a skip amount defining the number of pixels to be skipped when the differential value is less than the predetermined threshold value.

17. (Currently Amended) A computer program executed for driving an active matrix display device comprising a panel on which pixels are arranged in a matrix pattern, the computer program comprising:

a step of sequentially selecting pixels on the panel in units of rows;

a step of sequentially receiving pieces of video data, each including a status part indicating need/no need for rewriting a pixel and a main data part including video data to be written into the pixel; and

a step of writing corresponding video data into pixels which have been determined to be rewritten based on the status part among the selected pixels, while skipping the other pixels,

wherein a signal circuit receives a video signal including dot data and skip data, both data having the same format including a status part and a data part,

the signal circuit determines whether the video signal includes the dot data or the skip data, and

when it is determined that the video signal includes the skip data, the signal circuit obtains a skip amount indicating the number of pixels to be skipped from the data

part of the skip data, and when it is determined that the video signal includes the dot data, the signal circuit extracts luminance information of a pixel to be rewritten from the data part of the dot data.

18. (Currently Amended) A computer program executed for driving an active matrix display device comprising a pixel array unit including pixels which are arranged in a matrix pattern; a scanning circuit for sequentially selecting pixels in units of rows; and a signal circuit which receives a video signal including serial dot data corresponding to each pixel and which writes the dot data into the selected pixels, the computer program comprising:

a step of receiving a video signal which includes dot data corresponding to pixels to be rewritten but does not include dot data corresponding to pixels not to be rewritten and which includes skip data defining a skip amount; and

a step of sequentially processing the dot data and the skip data so as to write corresponding dot data-into pixels to be rewritten while skipping pixels not to be rewritten in accordance with the skip amount,

wherein the signal circuit receives a video signal including dot data and skip data, both data having the same format including a status part and a data part,

the signal circuit determines whether the video signal includes the dot data or the skip data, and

when it is determined that the video signal includes the skip data, the signal circuit obtains a skip amount indicating the number of pixels to be skipped from the data part of the skip data, and when it is determined that the video signal includes the dot data, the signal circuit extracts luminance information of a pixel to be rewritten from the data part of the

dot data.

19. (Currently Amended) A signal processing program executed by a computer, the program comprising:

a differential detecting step for detecting and outputting a differential value between the video data of a current frame corresponding to a target pixel and the video data of the previous frame;

a determining step for determining whether or not the differential value output in the differential detecting step is equal to or exceeds a predetermined threshold value; and

an output-data generating step for generating output dot data based on status data indicating that a pixel is to be rewritten and the video data of the current frame when the differential value is determined to be equal to or exceed the predetermined threshold value in the determining step and for generating output skip data based on status data indicating that a pixel is not to be rewritten and a skip amount defining the number of pixels to be skipped when the differential value is less than the predetermined threshold value.

20. (Currently Amended) A storage medium for storing a computer program executed for driving an active matrix display device comprising a panel on which pixels are arranged in a matrix pattern, the computer program comprising:

a step of sequentially selecting pixels on the panel in units of rows;

a step of sequentially receiving pieces of video data, each including a status part indicating need/no need for rewriting a pixel and a main data part including video data to be written into the pixel; and

a step of writing corresponding video data into pixels which have been determined to be rewritten based on the status part among the selected pixels, while skipping the other pixels,

wherein a signal circuit receives a video signal including dot data and skip data, both data having the same format including a status part and a data part,

the signal circuit determines whether the video signal includes the dot data or the skip data, and

when it is determined that the video signal includes the skip data, the signal circuit obtains a skip amount indicating the number of pixels to be skipped from the data part of the skip data, and when it is determined that the video signal includes the dot data, the signal circuit extracts luminance information of a pixel to be rewritten from the data part of the dot data.

21. (Currently Amended) A storage medium for storing a computer program executed for driving an active matrix display device comprising a pixel array unit including pixels which are arranged in a matrix pattern a scanning circuit for sequentially selecting pixels in units of rows; and a signal circuit which receives a video signal including serial dot data corresponding to each pixel and which writes the dot data into the selected pixels, the computer program comprising:

a step of receiving a video signal which includes dot data corresponding to pixels to be rewritten but does not include dot data corresponding to pixels not to be rewritten and which includes skip data defining a skip amount; and

a step of sequentially processing the dot data and the skip data so as to write corresponding dot data into pixels to be rewritten while skipping pixels not to be rewritten in accordance with the skip amount,

wherein the signal circuit receives a video signal including dot data and skip data, both data having the same format including a status part and a data part,

the signal circuit determines whether the video signal includes the dot data or the skip data, and

when it is determined that the video signal includes the skip data, the signal circuit obtains a skip amount indicating the number of pixels to be skipped from the data part of the skip data, and when it is determined that the video signal includes the dot data, the signal circuit extracts luminance information of a pixel to be rewritten from the data part of the dot data.

22. (Currently Amended) A storage medium for storing a signal processing program executed by a computer, the program comprising:

a differential detecting step for detecting and outputting a differential value between the video data of a current frame corresponding to a target pixel and the video data of the previous frame;

a determining step for determining whether or not the differential value output in the differential detecting step is equal to or exceeds a predetermined threshold value; and

an output-data generating step for generating output dot data based on status data indicating that a pixel is to be rewritten and the video data of the current frame when the differential value is determined to be equal to or exceed the predetermined threshold value in the

determining step and for generating output skip data based on status data indicating that a pixel is not to be rewritten and a skip amount defining the number of pixels to be skipped when the differential value is less than the predetermined threshold value.